

Complete Summary

GUIDELINE TITLE

Drug-eluting stents for the treatment of coronary artery disease.

BIBLIOGRAPHIC SOURCE(S)

National Institute for Health and Clinical Excellence (NICE). Drug-eluting stents for the treatment of coronary artery disease. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008 Jul. 48 p. (Technology appraisal guidance; no. 152).

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Coronary artery disease

GUIDELINE CATEGORY

Assessment of Therapeutic Effectiveness
Treatment

CLINICAL SPECIALTY

Cardiology
Internal Medicine
Thoracic Surgery

INTENDED USERS

Advanced Practice Nurses
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To evaluate the clinical effectiveness and cost-effectiveness of drug-eluting stents for the treatment of coronary artery disease

TARGET POPULATION

Adults with coronary artery disease undergoing percutaneous coronary intervention (PCI)

INTERVENTIONS AND PRACTICES CONSIDERED

Drug-eluting stents (DES)

MAJOR OUTCOMES CONSIDERED

- Clinical effectiveness
 - Combined event rate (major adverse cardiac events, target vessel failure) or event free survival
 - Mortality (all cause and cardiac)
 - Acute myocardial infarction
 - Target lesion revascularization
 - Target vessel revascularization
 - Repeat revascularization (percutaneous coronary intervention [PCI]/stent, other PCI or coronary artery bypass grafting [CABG])
 - Adverse effects (thrombosis, mal-absorption; incomplete stent apposition; device failures/defects)
 - Angiographic binary restenosis
 - Late loss
 - Health-related quality of life
- Cost-effectiveness

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): The National Institute for Health and Clinical Excellence (NICE) commissioned an independent academic centre to perform a systematic literature review on the technology considered in this appraisal and prepare an assessment report. The assessment report for this technology appraisal was prepared by the Liverpool Reviews and Implementation Group, University of Liverpool (see the "Availability of Companion Documents" field).

Identification of Evidence: Clinical Effectiveness and Cost-effectiveness

Search Strategy

The search incorporated a number of strategies. Search terms for electronic databases included a combination of index terms (e.g., STENTS and CORONARY DISEASE) and free text words (e.g., 'stent' and 'coronary').

No limitation was included on study type and therefore identification of clinical effectiveness and cost-effectiveness data were combined within the electronic searches.

The following electronic databases were searched for relevant published literature for the period from December 2002 to June 2005. Searching dated from the limit of the searches in the Assessment Group's previous assessment.

- CDSR (Cochrane Database of Systematic Reviews)
- CENTRAL (Cochrane Central Register of Controlled Trials)
- DARE (Database of Abstracts of Reviews of Effectiveness)
- EMBASE
- HTA database
- ISI Web of Science- Proceedings (Index to Scientific & Technical Proceedings)
- ISI Web of Science- Science Citation Index Expanded
- MEDLINE
- NHS EED (National Health Service Economic Evaluation Database)

In addition, MEDLINE (using the PubMed interface) was searched again later in the assessment (spanning 1 March to 3 Aug 2005) in order to identify publications that might not have been indexed at the time of the main electronic searching. Details of the search strategies and the number of references retrieved for each search are provided in Appendix 1 of the Assessment Report (see the "Availability of Companion Documents" field).

Reference lists of included studies and device manufacturer submissions were searched to identify other relevant studies of clinical effectiveness, costs or cost-effectiveness.

Handsearching of cardiology conference abstracts was conducted. Latest conference proceedings for the following meetings were obtained for the purposes of handsearching:

- American College of Cardiology
- American Heart Association
- British Cardiac Society
- European Society of Cardiology
- Transcatheter Cardiovascular Therapeutics

Internet resources were examined for information on clinical studies and cost data. These included the following:

- Cardiovascular Revascularization Therapies (www.crtonline.org)
- The heart.org (www.theheart.org)
- Transcatheter Cardiovascular Therapeutics (www.tctmd.com)

All the references were exported to an EndNote bibliographic database, Thomson ISI ResearchSoft, Cal., USA.

Selection of Clinical Effectiveness and Cost-Effectiveness Evidence

The records identified in the electronic searches were assessed for inclusion in two stages. Firstly pairs of reviewers independently scanned all the titles and abstracts and identified the potentially relevant articles to be retrieved. Any differences in selection choice were discussed between the pairs and consensus reached in all cases. Full text reports of these selected papers were then obtained and assessed independently by at least two reviewers for inclusion. The inclusion/exclusion assessment of each reviewer was recorded on a pre-tested, standardised form. Data on levels of agreement between reviewers is available from the Assessment Group upon request.

A table summarising the selection and inclusion of studies is provided in the Appendix 1 of the Assessment Report (see the "Availability of Companion Documents" field).

Methods for Reviewing Clinical Effectiveness

Inclusion Criteria

Studies were considered eligible for inclusion if they met the following criteria:

Study Design

- Randomised controlled trials (RCTs); non-randomised controlled trials (such as prospective registries); non-controlled studies (except case reports of single patient experience).

Population

- Adults with coronary artery disease (CAD), undergoing treatment of native and intervention naïve vessel(s) by percutaneous coronary intervention (PCI) with the use of stent(s).

Intervention

- Drug-eluting coronary artery stents which were expected to be available for use by the NHS close to the time of the assessment.

Comparators

- Drug-eluting stent (DES) versus non drug-eluting bare-metal stent (BMS)
- DES of different design (i.e., DES versus DES).

Outcomes

Studies were included in the clinical review if they reported primary data on one or more of the following outcomes:

- Combined event rate (major adverse cardiac events [MACE], target vessel failure [TVF]) or event free survival
- Mortality (all cause, cardiac)
- Acute myocardial infarction (AMI)
- Target lesion revascularisation (TLR)
- Target vessel revascularisation (TVR)
- Repeat revascularisation (PCI/stent, other PCI or coronary artery bypass grafting [CABG])
- Adverse effects (thrombosis, mal-absorption; incomplete stent apposition; device failures/defects)
- Angiographic binary restenosis
- Late loss
- Health-related quality of life

Exclusion Criteria

Studies were excluded based on the following criteria:

- Single case reports
- Randomised controlled trials (RCTs) that:
 - Provided only unplanned, interim findings
 - Provided data on only a sub-group of the enrolled patients
 - Were continuing to recruit patients
 - Where patients numbers treated with specific intervention (i.e., a particular type of stent) could not be determined
- Studies of:
 - Treatment of in-stent restenosis
 - Treatment of saphenous vein grafts
- Comparison of:
 - DES with other PCI interventions (e.g., atherectomy, rotabators, brachytherapy)
 - DES with surgery
 - Variations of drug-loading among single DES types ('brands')

Methods for Reviewing Cost-Effectiveness

Inclusion and Exclusion Criteria

Using explicit, predetermined criteria, two reviewers independently identified reports for inclusion in the review of published economic evaluations and as a source of cost or related data to inform development of the Assessment Group's own economic evaluation and budget impact assessment.

Any disagreements in inclusion for the cost-effectiveness assessment were resolved through discussion.

Inclusion Criteria

Study Design

Full economic evaluations that compared two or more options and considered both costs and consequences including:

- Cost-effectiveness analysis
- Cost-utility analysis
- Cost-benefit analysis

Population

Adults with CAD, undergoing treatment of native and intervention naïve vessel(s) by PCI with the use of stent(s).

Intervention

Drug-eluting coronary artery stents which were expected to be available for use by NHS close to the time of the assessment. As for the review of clinical effects.

Comparators

- Drug-eluting stent versus non drug-eluting BMS
- DES of different design

Health Outcomes in an Economic Framework

- Quality adjusted life years (QALY)
- Disease specific measures, such as: MACE, repeat revascularisations avoided, MACE free survival, TLR and TVR

Exclusion Criteria

Reports were excluded from the review of economic evaluations if:

- The main source of clinical efficacy data was not explicitly stated
- No attempt to synthesise costs and benefits was conducted
- The source was a letter, editorial, review, commentary or methodological paper.

NUMBER OF SOURCE DOCUMENTS

Clinical Effectiveness

- Seventeen randomised controlled trials (RCTs) (reported in 58 records) comparing drug-eluting stent (DES) with bare-metal stent (BMS) were included.
- Eight RCTs (reported in 11 records) comparing DES with other DES were identified.
- Twenty-seven non-RCTs for assessment of new and existing DES were identified.

Cost-Effectiveness

- A total of 10 full economic evaluations were included
- Seven manufacturers' submissions were provided

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Meta-Analysis
Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): The National Institute for Health and Clinical Excellence (NICE) commissioned an independent academic centre to perform a systematic literature review on the technology considered in this appraisal and prepare an assessment report. The assessment report for this technology appraisal was prepared by the Liverpool Reviews and Implementation Group, University of Liverpool (see the "Availability of Companion Documents" field).

Clinical Effectiveness

Data Extraction

Data extraction for the review of clinical effectiveness was carried out by two reviewers. Data were independently abstracted by one reviewer into pretested data extraction forms created within the Access database application, Microsoft Corporation, and then checked for accuracy by a second reviewer.

Data presented from multiple reports of single trials were extracted onto a single data extraction record.

Quality Assessment

Two of three reviewers independently evaluated the included studies for methodological quality (utilising forms created in Access) using criteria based on Centre for Reviews and Dissemination, Report 4 (refer to Appendix 2 of the Assessment Report [see the "Availability of Companion Documents" field]). Any discrepancies in quality grading were resolved through discussion.

Outcomes/Data Analysis

Outcome data from trials comparing drug-eluting stent (DES) with bare-metal stent (BMS) are presented in Table 3 in Appendix 3 of the Assessment Report (see the "Availability of Companion Documents" field). Meta-analysis is presented for mortality, acute myocardial infarction (AMI), composite event rate (major adverse coronary and cerebrovascular events [MACE], target vessel failure [TVF]), target lesion revascularisation, target vessel revascularisation, angiographic binary restenosis rates and late luminal loss.

Data in the form of odds ratio (OR) and 95% confidence intervals (CI) were analysed using the Mantel-Haenszel method, fixed-effect model provided by the *RevMan Analyses 1.0* application within *RevMan 4.2*. Similarly, for continuous outcomes, weighted mean difference (WMD) was analysed.

Heterogeneity was tested by the chi-squared test and the I^2 statistic was obtained to describe the proportion of the variability using *RevMan Analyses 1.0*. Where quantitative heterogeneity was indicated, analysis using a random-effects model was conducted for comparison with results of fixed-effect-based analysis.

For convenience, studies are grouped according to drug eluted in the meta-analysis. Pooled estimates (OR 95%CI) are provided for each 'eluted drug' subgroup. Pooled effect estimate incorporating available data for all DES analysed are presented in Table 4-3 of the Assessment Report (see the "Availability of Companion Documents" field).

Refer to Section 4 of the Assessment Report (see the "Availability of Companion Documents" field) for more information.

Cost-Effectiveness

Quality of Economic Literature

Ten studies were quality assessed against a standard checklist. In general the quality of data was reasonably high (see Table 6-6 of the Assessment Report [see the "Availability of Companion Documents" field]), except in four key areas. Firstly, the resource use was only reported separately from costs in four of the studies, making it impossible to validate underlying assumptions. Secondly, a discount rate was not applied by one study, and no explanation was given as to why not. Furthermore, the sensitivity analysis was not fully explained or justified in that study. Finally and most importantly, the modelling methodology was poorly described by seven of the studies, making it difficult to access the credibility of their models.

Refer to Sections 6 and 7 of the Assessment Report (see the "Availability of Companion Documents" field) for more information.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Considerations

Technology appraisal recommendations are based on a review of clinical and economic evidence.

Technology Appraisal Process

The National Institute for Health and Clinical Excellence (NICE) invites 'consultee' and 'commentator' organisations to take part in the appraisal process. Consultee organisations include national groups representing patients and carers, the bodies representing health professionals, and the manufacturers of the technology under review. Consultees are invited to submit evidence during the appraisal and to comment on the appraisal documents.

Commentator organisations include manufacturers of the products with which the technology is being compared, the National Health Service (NHS) Quality Improvement Scotland and research groups working in the area. They can comment on the evidence and other documents but are not asked to submit evidence themselves.

NICE then commissions an independent academic centre to review published evidence on the technology and prepare an 'assessment report'. Consultees and commentators are invited to comment on the report. The assessment report and the comments on it are then drawn together in a document called the evaluation report.

An independent Appraisal Committee then considers the evaluation report. It holds a meeting where it hears direct, spoken evidence from nominated clinical experts, patients and carers. The Committee uses all the evidence to make its first recommendations, in a document called the 'appraisal consultation document' (ACD). NICE sends all the consultees and commentators a copy of this document and posts it on the NICE website. Further comments are invited from everyone taking part.

When the Committee meets again it considers any comments submitted on the ACD; then it prepares its final recommendations in a document called the 'final appraisal determination' (FAD). This is submitted to NICE for approval.

Consultees have a chance to appeal against the final recommendations in the FAD. If there are no appeals, the final recommendations become the basis of the guidance that NICE issues.

Who is on the Appraisal Committee?

NICE technology appraisal recommendations are prepared by an independent committee. This includes health professionals working in the NHS and people who are familiar with the issues affecting patients and carers. Although the Appraisal Committee seeks the views of organisations representing health professionals, patients, carers, manufacturers and government, its advice is independent of any vested interests.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

Consideration of the Evidence

After agreeing on the parameters to use in the Assessment Group's model, the Committee discussed the resulting incremental cost-effectiveness ratios (ICERs) for the base case and risk groups, assuming:

- The absolute risk of revascularization with bare-metal stents (BMSs) for the total population is 11%, with resulting risks of revascularization for small vessels of 19% and for long lesions of 11.7%
- The mean number of stents per patient is 1.571
- The relative risk reduction with drug-eluting stents (DESs) for the base case is 55% for the total population, and 65% for patients with small vessels and long lesions
- Price differences of DESs over BMSs of 600 and 300 pounds sterling

At a relative risk reduction of 55% with DESs, the resulting ICER for the total population of patients was associated with a cost per quality-adjusted life year (QALY) of approximately 171,000 pounds sterling at a price difference of 600 pounds sterling and 74,000 pounds sterling at a price difference of 300 pounds sterling. For the higher risk groups of patients (that is, those with long lesions and those with small vessels) using a DES, with a relative risk reduction of 65%, the resulting ICERs were associated with costs per QALYs of 126,000 pounds sterling and 95,000 pounds sterling, respectively, at a price difference of 600 pounds sterling and 47,000 pounds sterling and 25,000 pounds sterling, respectively, at a price difference of 300 pounds sterling.

The Committee agreed that DESs could not be considered a cost-effective use of National Health Service (NHS) resources at a price difference of 600 pounds sterling. After considering the alternative parameter values presented by the Assessment Group and British Cardiovascular Intervention Society (BCIS), the Committee concluded that on balance at a price difference between DESs and BMSs of not more than 300 pounds sterling, DESs could be considered a cost effective option in patients with small vessels and long lesions.

Refer to Section 4 of the original guideline document for information on the economic analyses provided by the manufacturers, the Assessment Group, and the Appraisal Committee considerations.

METHOD OF GUIDELINE VALIDATION

External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Consultee organizations from the following groups were invited to comment on the draft scope, Assessment Report and the Appraisal Consultation Document (ACD) and were provided with the opportunity to appeal against the Final Appraisal Determination.

- Manufacturer/sponsors
- Professional/specialist and patient/carer groups
- Commentator organisations (without the right of appeal)

In addition, individuals selected from clinical expert and patient advocate nominations from the professional/specialist and patient/carer groups were also invited to comment on the ACD.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the National Institute for Health and Clinical Excellence (NICE) and the National Guidelines Clearinghouse (NGC): This guidance replaces sections 1.2–1.4 of National Institute for Health and Clinical Excellence (NICE) technology appraisal guidance 71 (2003), available from the [NICE Web site](#).

Sections 1.1 and 1.5 of technology appraisal guidance 71 recommend when to use a stent. This part review recommends under what circumstances a drug-eluting stent should be used.

Guidance

Drug-eluting stents are recommended for use in percutaneous coronary intervention for the treatment of coronary artery disease, within their instructions for use, only if:

- The target artery to be treated has less than a 3-mm calibre or the lesion is longer than 15 mm, and
- The price difference between drug-eluting stents and bare-metal stents is no more than 300 pounds sterling.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is not specifically stated.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate use of drug-eluting stents for the treatment of coronary artery disease

POTENTIAL HARMS

There is a risk of stent thrombosis associated with the use of both types of stent (drug-eluting stents [DESs] and bare-metal stents [BMSs]).

For details of side effects and specific contraindications for DESs, refer to the instruction for use (IFU) document attached to each DES.

CONTRAINDICATIONS

CONTRAINDICATIONS

For details of side effects and specific contraindications for drug-eluting stents (DESs) refer to the instruction for use (IFU) document attached to each DES.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- This guidance represents the view of the Institute, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. The guidance does not, however, override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.
- Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

- The Healthcare Commission assesses the performance of National Health Service (NHS) organizations in meeting core and developmental standards set by the Department of Health in "Standards for better health" issued in July 2004. The Secretary of State has directed that the NHS provides funding and resources for medicines and treatments that have been recommended by the National Institute for Health and Clinical Excellence (NICE) technology appraisals normally within 3 months from the date that NICE publishes the guidance. Core standard C5 states that healthcare organisations should ensure they conform to NICE technology appraisals. NICE recognises that many NHS organisations already have contracts in place and therefore would not be able to implement the recommendations contained within the Final Appraisal Determination (FAD) immediately. However as contracts come up for renewal NHS organisations would be expected to use relevant contracting arrangements to ensure that drug-eluting stents (DESS) are obtained in line with the recommendations.
- "Healthcare Standards for Wales" was issued by the Welsh Assembly Government in May 2005 and provides a framework both for self-assessment by healthcare organisations and for external review and investigation by Healthcare Inspectorate Wales. Standard 12a requires healthcare organisations to ensure that patients and service users are provided with effective treatment and care that conforms to NICE technology appraisal guidance. The Assembly Minister for Health and Social Services issued a Direction in October 2003 that requires local health boards and NHS trusts to make funding available to enable the implementation of NICE technology appraisal guidance, normally within 3 months.
- NICE has developed tools to help organisations implement this guidance (listed below). These are available on the NICE website (www.nice.org.uk/TA152; see also the "Availability of Companion Documents" field).
 - Costing report and costing template to estimate the savings and costs associated with implementation
 - Audit support for monitoring local practice

IMPLEMENTATION TOOLS

Audit Criteria/Indicators
Patient Resources
Quick Reference Guides/Physician Guides
Resources

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

National Institute for Health and Clinical Excellence (NICE). Drug-eluting stents for the treatment of coronary artery disease. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008 Jul. 48 p. (Technology appraisal guidance; no. 152).

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2008 Jul

GUIDELINE DEVELOPER(S)

National Institute for Health and Clinical Excellence (NICE) - National Government Agency [Non-U.S.]

SOURCE(S) OF FUNDING

National Institute for Health and Clinical Excellence (NICE)

GUIDELINE COMMITTEE

Appraisal Committee

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Committee members are asked to declare any interests in the technology to be appraised. If it is considered there is a conflict of interest, the member is excluded from participating further in that appraisal.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) format from the [National Institute for Health and Clinical Excellence \(NICE\) Web site](#).

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Drug-eluting stents for the treatment of coronary artery disease. Quick reference guide. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008 Jul. 2 p. (Technology appraisal 152). Available in Portable Document Format (PDF) from the [National Institute for Health and Clinical Excellence \(NICE\) Web site](#).
- Drug-eluting stents for the treatment of coronary artery disease (part review of NICE technology appraisal guidance 71). Costing template and report. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008 Jul. Various p. (Technology appraisal 152). Available in Portable Document Format (PDF) from the [NICE Web site](#).
- Drug-eluting stents for the treatment of coronary artery disease (part review of NICE technology appraisal guidance 71). Audit support. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008. 8 p. (Technology appraisal 152). Available in Portable Document Format (PDF) from the [NICE Web site](#).
- Drug-eluting stents: a systematic review & economic evaluation. Assessment report. 2005 Oct 31. 221 p. Available in Portable Document Format (PDF) from the [NICE Web site](#).

Print copies: Available from the National Health Service (NHS) Response Line 0870 1555 455. ref: N1636. 11 Strand, London, WC2N 5HR.

PATIENT RESOURCES

The following is available:

- Drug-eluting stents for the treatment of coronary artery disease. Understanding NICE guidance - Information for people who use NHS services. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008 Jul. 4 p. (Technology appraisal 152).

Electronic copies: Available in Portable Document Format (PDF) from the [National Institute for Health and Clinical Excellence \(NICE\) Web site](#).

Print copies: Available from the NHS Response Line 0870 1555 455. ref: N1637. 11 Strand, London, WC2N 5HR.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

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